

4.13

NAME Hyung-Chul Lim, Man-Soo Choi, Eunseo Park, Seong-Yeol Yu, Ki-Pyoung Sung, Jong-Uk Park and Chul-Sung Choi
Korea Astronomy and Space Science Institute

EMAIL

SESSION Session 4: Automation and autonomous station operations

TYPE Presentation

TITLE The new Korean SLR system and its automatic operation

ABSTRACT

Korea Astronomy and Space Science Institute (KASI) has been developing two satellite laser ranging (SLR) systems in Geochang and Sejong site. The Sejong SLR station was joined to International Laser Ranging Service(ILRS) network in August 2015, which has the separate optical path that employs the 40cm receiving and 10cm transmitting telescopes. The Geochang SLR station will be established in October 2017, which has the common coude optical path employing the 100 cm telescope. It is capable of fully automated laser ranging to satellites from 300 km altitude to geosynchronous orbit, and to the ground target as well as the star calibration. In addition, it is able to take an image of satellites and space debris using an adaptive optics. Many sensors and devices are required for the automatic and safe operation; rain sensor, cloud sensor, aircraft detection device, UPS monitoring system and so on. Especially, the rain sensor and aircraft detection device are redundant in the Geochang SLR system for its safer operation. In this presentation, the Geochang SLR system will be introduced as well as its configuration for the automatic and safe operation.